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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,551	05/04/2001	Stephen B. Heppe	000571.00029	6140

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WASHINGTON, DC 20037

EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,551

Applicant(s)

HEPPE ET AL.

Examiner

Willie J. Daniel, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The objection to Fig. 2 is withdrawn.

Claim Objections

2. The objection to Claim 1 is withdrawn, as the proposed claim 1 correction is approved.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Vialen et al. (hereafter Vialen) (US 6,542,516 B1).

Regarding **Claim 1**, Vialen (see Figures 1, 3, 4, 5 and column 9 lines 3 - 19) discloses a hybrid radio apparatus (Figure 5) for a mobile radio station (100) capable of operating in at least two different radio networks simultaneously (302, 303) (column 3 lines 16 - 19), employing at least two different protocols (Figure 3 and column 3 lines 60 -63, column 4 lines 36 - 49), the hybrid radio apparatus (Figure 5) comprising:

a hybridization module (510) for at least one of the networks (302); and

radio equipment (504, 508, 509, 511) for at least a second one of the networks (303);

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said hybridization module (510) comprising electronics and software necessary to emulate some or all protocols of the first network (302)(column 9 lines 17 – 20), and communicating at a peer level with protocols of the second network (303) resident in the hybrid radio apparatus (Figure 5), said emulation and peer level communication allowing an appearance of communication via first one of the networks (302) (column 4 lines 36 – 44).

Regarding **Claim 5**, Vialen discloses the hybrid radio apparatus (Figure 5) as set forth in **claim 1**, wherein the hybrid radio apparatus (Figure 5) automatically decides to operate via the first network (302), or the second network (303), when both the first network (302) and second network (303) are available, based on pre-set or user specified decision criteria (column 6 lines 2 – 9).

Regarding **Claim 6**, Vialen discloses the hybrid radio apparatus (Figure 5) for a mobile station (100), the hybrid radio apparatus (Figure 5) comprising:

a hybridization module (510) which emulates protocols normally in one or several ground facilities providing services for a first network or system (302)(column 4 lines 36 – 44);

mobile radio equipment (504, 508, 509, 511) operating on a second network (303) or system which is different from the first network or system (302); and

mobile equipment (504, 508, 509, 511) usable with the second network (303) or system over the mobile radio equipment (504, 508, 509, 511) and over the first network or system (302) over the hybridization module (510) (see Figures 3, 5 and column 9 lines 3 – 19).

Regarding **Claim 7**, Vialen discloses the hybrid radio apparatus (Figure 5) as set forth in **claim 6**, wherein the mobile equipment comprises a human interface (506, 507) and management unit (505)(see Figure 5 and column 9 lines 11 – 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vialen et al.

(hereafter Vialen) (US 6,542, 516 B1) in view of well known prior art (MPEM 2144.03).

Regarding **Claim 2**, Vialen discloses the hybrid radio apparatus as set forth in **claim 1**, wherein the hybridization module is tailored to a set of network protocols (see **claim 1**). Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304), which could be defined as any protocol. However, Vialen fails to specifically disclose a hybridization module that is tailored to a set of network protocols which contains at least one member selected from the group consisting of ACARS, VDL/2, and VDL/4. However, the concept of having additional protocols in addition to those specifically disclosed by Vialen was well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include any desired protocol including ACARS, VDL/2, or VDL/4 as a protocol included in the hybridization module (510) for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Regarding **Claim 3** Vialen discloses the hybrid radio apparatus as set forth in **claim 1** (see **claim 1**), wherein the radio equipment (504, 508, 509, 511) is designed to operate with a

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set of systems defined in the hybridization module (510). Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304), which could be defined as any protocol. In addition, the radio equipment (504, 508, 509, 511) is defined in a generic fashion to allow for operation with the generic protocol or system (see column 9 lines 3 – 19). However, Vialen fails to specifically disclose radio equipment, which is designed to operate with a set of systems which contains at least one member selected from the group consisting of ACARS, VDL/2, and VDL/4. However, the concept of having radio equipment designed to operate with additional systems in addition to those specifically disclosed by Vialen was well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include ACARS, VDL/2, or VDL/4 as a protocol included in the hybridization module (510) and radio equipment (504, 508, 509, 511) adapted for the ACARS, VDL/2, or VDL/4 for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Regarding **Claim 4**, Vialen discloses the hybrid radio apparatus as set forth in **claim 1** (see **claim 1**), wherein the hybridization module (510) operates to allow different communication protocols, and the radio equipment (504, 508, 509, 511) is operable with these various protocols. Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304) in the hybridization module (510), which could be defined as any protocol. In addition, the radio equipment (504, 508, 509, 511) is defined in a generic fashion to allow for operation with a generic protocol or network (see column 9 lines 3 – 19). Additionally, Vialen discloses a hybrid radio apparatus (Figure 5) for a mobile radio station

(100) capable of operating in at least two different radio networks simultaneously (see column 3 lines 16 – 19), employing at least two different protocols. However Vialen fails to specifically disclose a hybridization module operating for ACARS and radio equipment operable for the VDL/4 network. However, the concept of having a hybridization module and radio equipment designed to operate with additional systems in addition to those specifically disclosed by Vialen was well known in the art.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include ACARS as a protocol included in the hybridization module (510) and radio equipment (504, 508, 509, 511) adapted for VDL/4 for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Response to Arguments

5. Applicant's arguments filed 20 July 2004 have been fully considered but they are not persuasive.

In response to applicant's argument on pg. 4, 5th paragraph "the memory (510) as a hybridization module. Applicant disagrees with the characterization of the reference set forth", Examiner respectfully disagrees. Vialen has a memory (510) that holds the recorded programs for the microprocessor (505) to operate and communicate via the protocols (e.g., GSM, GPRS, B-ISDN) (see col. 4, lines 20-49; col. 8, lines 38-46; col. 9, lines 11-16; Figs. 3-5). The mobile station communicates with radio access network using the various protocols. Also, the mobile station can store protocol XXX-SAP (308) in which the mobile

station can be designed and adapted to communicate with additional protocols. The UAL “301” is adaptable to map different protocols (see col. 8, line 38 - col. 9, line 2) which allows level communication between the different protocols.

Conclusion

6. Prior art made of record and not relied upon is considered pertinent to applicant’s disclosure.

a. Narayanaswamy (US 6,295,457 B1) discloses an “Integrated Cellular Telephone Basestation with Internet Gateway”.

b. Korpela (US 5,946,634) disclose a “Mobile Communications”.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR
18 October 2004

Marsha D Banks-Harold
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